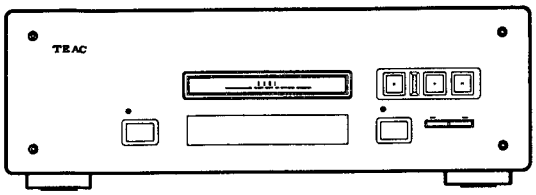
TEAC®



SERVICE MANUAL

VRDS-7

Compact Disc Player

COMPACT disc DIGITAL AUDIO

Effective : June, 1993

5704065200

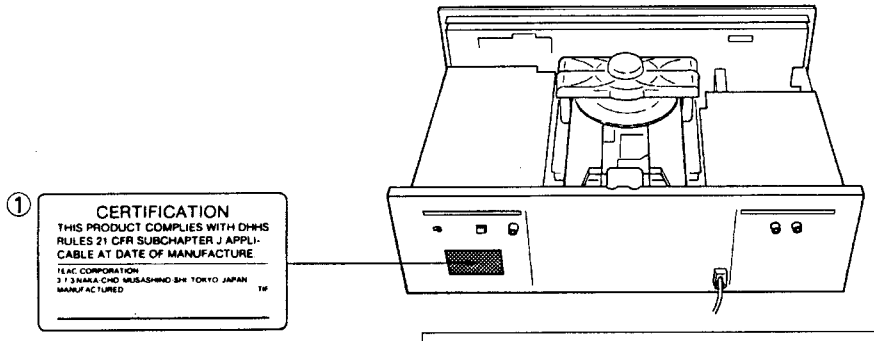
1 SAFETY INFORMATION

SAFETY INFORMATION

This product has been designed and manufactured according to FDA regulations "title 21, CFR, chapter 1, subchapter J, based on the Radiation Control for Health and Safety Act of 1968", and is classified as class 1 laser product. There is not hazardous invisible laser radiation during operation because invisible laser radiation emitted inside of this product is completely confined in the protective housings.
The label required in this regulation is shown ①.

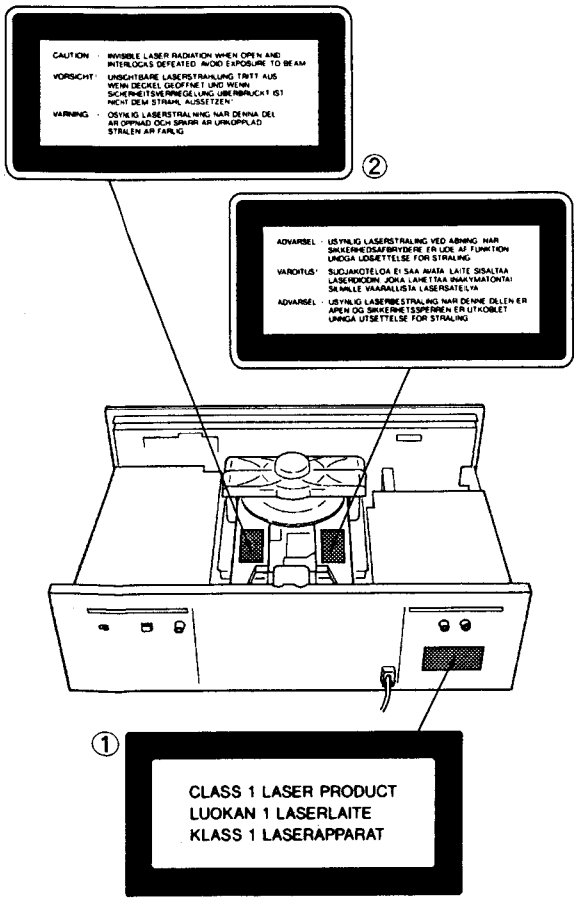
CAUTION

- If you remove the above-mentioned housings under the operating state of the product, there is a possibility of human access to the invisible laser radiation emitted from the optical pickup.
  Pay careful attention, not to let the invisible laser beam enter into your eyes.
- If you find a troubled state of the laser diode, change to the specified new optical pickup.
- If you find a troubled state of safety interlock parts, change to the same type parts described in parts list.



Optical pickup: Type : KSS-240A
Manufacturer : SONY Corporation
Laser output : Less than 0.2 mW on the objective lens
Wavelength : 760 – 800 nm

• CAUTION • ACHTUNG • OBSERVERA • ADVARSEL



① THIS LABEL IS ATTACHED TO THE PLACE AS ILLUSTRATED TO INFORM THAT THE APPARATUS CONTAINS A LASER COMPONENT.

① DIESE AUFKLEBEMARKE IST AN DEM IN DER ABBILDUNG GEZEIGTEN ORT ANGEBRACHT UM DARAUF HINZUWEISEN, DASS IM INNERN DES GERÄTS EINE LASER-KOMPONENTE BEFINDET.

① PÅSKRIFTEN SITTER PÅ APPARATEN SOM VISAS SOM UPPMANING OM ATT APPARATEN OMFATTAR EN INBYGGD LASERKOMPONENT.

① DETTE MÆRKAT ER ANBRAGT SOM VIST I ILLUSTRATIONEN FOR AT ADVARE BRUGEREN OM AT APPARATET INDEHOLDER EN LASERKOMPONENT.

② DETTE MÆRKAT ER SOM VIST PÅ ILLUSTRATIONEN ANBRAGT PÅ INDERSIDEN AF TOPDÆKSLET FOR AT ADVARE BRUGEREN OM AT YDERLIGERE FREMTRÆNGEN VIL VÆRE FORBUNDET MED FARE FOR AT UDSÆTTE SIG FOR LASERSTRÅLING.

ADVARSEL- BETJENING AF ANDRE KONTROLLER OG REGULATORER ELLER BENYTTELSE AF ANDRE FREMGANGSMÅDER END BESKREVET HERI ER FORBUNDET MED FARE FOR USDÆTTELSE FOR LASERSTRÅLING.

VARNIG: APPARATEN INNEHÅLLER LASER KOMPONENT MED STRÅLNING ÖVERSTIGANDE KLASS 1

"ADVARSEL: USYNLIG LASERSTRÅLING VED ÅBNING NAR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSAETTELSE FOR STRÅLING."

"VAROITUS! SUOJAKOTELOA EI SAA AVATA. LAITE SISÄLTÄÄ LASERDIODIN. JOKA LÄHETTÄÄ (NÄKYMÄTÖNTÄ) SILMILLE VAARALLISTA LASERSÄTEILYÄ".

ADVARSEL: USYNLIG LASERBESTRÅLING NÅR DENNE DELEN ER ÅPEN OG SIKKERHETSSPERREN ER UTKOBLET UNNGÅ UTSETTELSE FOR STRÅLING.

2 SPECIFICATIONS
仕 様

AUDIO	
Number of Channels	2
Frequency Response	1 – 20,000Hz ± 0.3dB
Signal to Noise Ratio	Better than 110dB (1kHz)
Dynamic Range	Better than 99dB (1kHz)
Harmonic Distortion	0.0015% (1kHz)
Wow and Flutter	Unmeasurable (Quartz accuracy)
Channel Separation	Better than 110dB (1kHz)
Output Analog	2.2Vrms
Digital	0.5Vp-p/75Ω (Coaxial) -15dBm – -21dBm (Optical)
D/A Converter	Bitstream Conversion
Digital Filter	8-times oversampling 20-bit digital filter
Analog Filter	3rd order Butterworth filter

PICK UP	
Type	Optical 3-Beam laser pickup
Objective Lens	2-dimensional parallel drive
Laser Type	GaAlAs type semiconductor laser
Wave Length	780nm

SIGNAL FORMAT	
Sampling Frequency	44.1kHz
Quantization Bit	16-bit linear/channel
Channel Bit Rate	4.3218Mb/sec
Channel Modulation Code	EFM (Eight to Fourteen Modulation)
Error Correction	CIRC (Cross Interleave Reed Solomon Code)

GENERAL	
Power Requirements	120/230V AC, 50-60Hz (U.S.A./Canada/General Export Model) 230V AC, 50Hz (Europe Model) 240V AC, 50Hz (U.K. Model)
Power Consumption	22 watts
Dimensions (W × H × D)	442 × 149 × 331mm (17-3/8" × 5-7/8" × 13-1/16")
Weight (net)	9kg (19-13/16 lbs)
Standard Accessories	Wireless Remote Control Unit RC-481 (VRDS-7N) RC-495 (VRDS-7B) Pin Plug Cord Battery (SUM-3, "AA", "R6" type) × 2

● Improvements may result in specification or feature changes without notice.

〈オーディオ〉	
オーディオチャンネル数	2チャンネル
周波数特性	1～20,000Hz ± 0.3dB
SN比	110dB以上 (EIAJ)
ダイナミックレンジ	99dB以上 (EIAJ)
高調波歪率	0.0015%以下 (EIAJ)
ワウ・フラッター	測定限界値以下(水晶発振精度)
チャンネルセパレーション	110dB以上 (EIAJ)
アナログ出力	2.2Vrms
デジタル出力	0.5Vp-p/75Ω (COAXIAL) – 15～– 21dBm (OPTICAL)
D/Aコンバーター	ビットストリーム
デジタルフィルター	8倍オーバーサンプリング 20ビットデジタルフィルター
アナログフィルター	3次バターワースフィルター

〈ピックアップ〉	
方式	対物レンズ駆動、光学式3ビーム
対物レンズ駆動方式	2次元平行駆動
光源	半導体レーザー
波長	780nm

〈信号フォーマット〉	
標本化周波数	44.1kHz
量子化ビット数	16ビット・リニア/チャンネル
伝送レート	4.3218Mb/sec
変調方式	EFM
エラー訂正方式	CIRC

〈一般〉	
電源	100V AC 50-60Hz
消費電力	18W
外形寸法	442 × 149 × 331mm (W × H × D)
重量	9kg

付属品
- ワイヤレスリモコン RC-481 (VRDS-7N)
  RC-495 (VRDS-7B)
- 乾電池(単3、SUM-3) × 2
- 取扱説明書

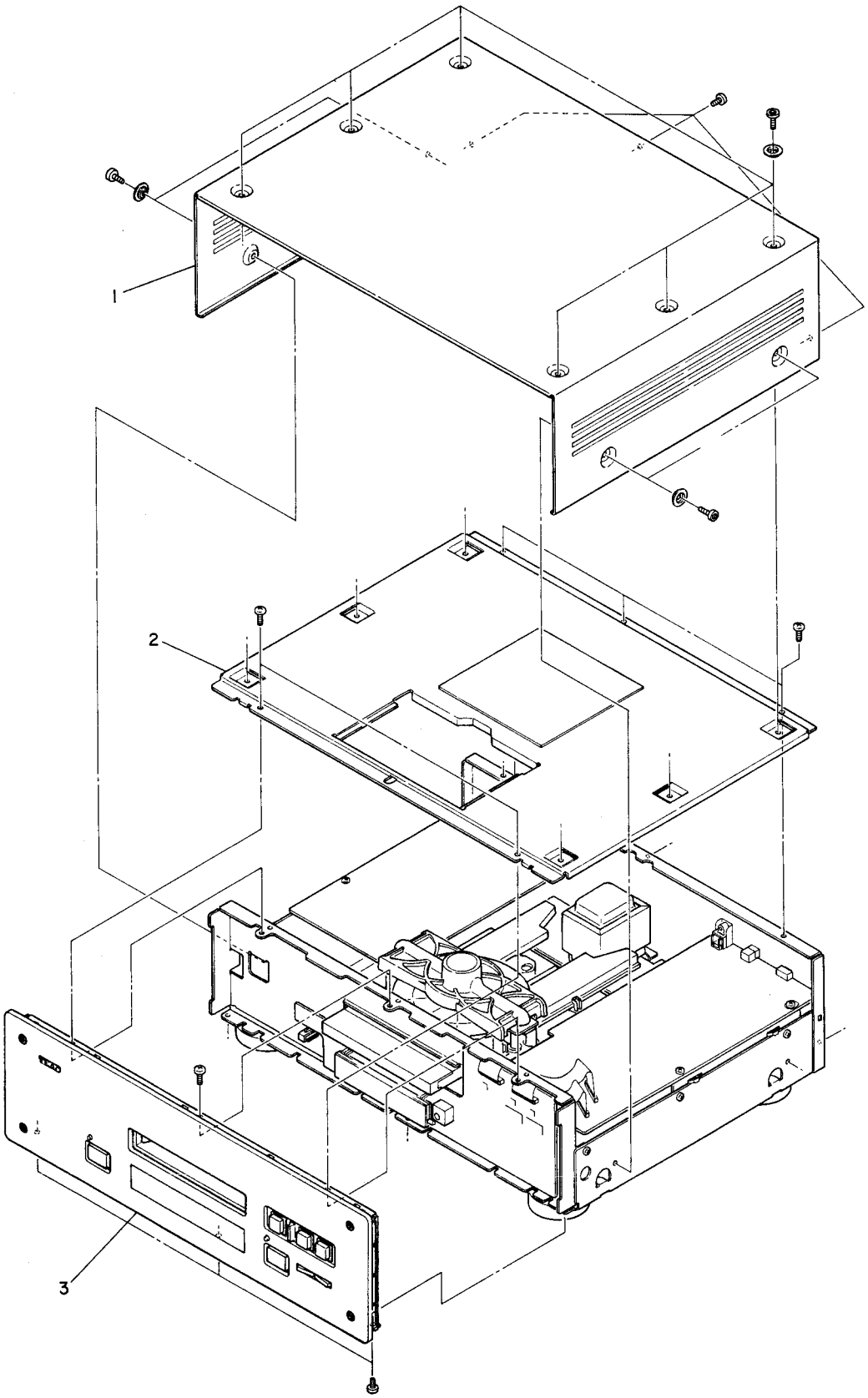
＊仕様および外観は、改善のため予告なく変更することがあります。

3 CASE AND FRONT PANEL REMOVAL

外装部品の外し方

Disassemble in number-order

番号順に外してください



4 ADJUSTMENT AND CHECKS
調整と確認

1. Handling the pickup assembly

- Before servicing the pickup assembly be sure to prevent electrostatic-inducer destruction by grounding not only test equipment in use but also yourself as shown in Fig. 4-1.
  * Electrostatic charge drastically shortens the operating life of the laser diode or possibly results in its destruction.
- During the transportation, mounting and dismounting of the assembly, support with your fingers at points A and B as shown in Fig. 4-2. Be particularly careful not to touch the actuator, photosensor and LD plate and do not apply force to them.
- Don't disassemble the pickup ass'y.
- Don't apply shock to the pickup ass'y.
- Don't place the assembly in a place subject to excessive dust, heat or moisture.

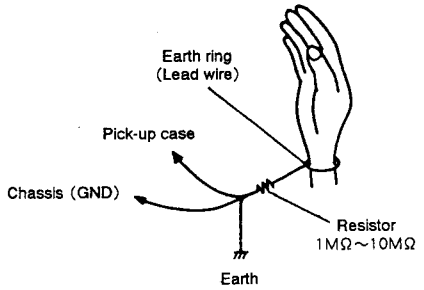


Fig. 4-1

1. ピックアップASSYの取扱

- ピックアップASSYを取り扱う場合は、測定器などに確実なアースを取ると共に、人体アースを行ない、静電破壊を十分防止してください。(Fig. 4-1)
  ＊レーザーダイオードは、静電気が加わると寿命が著しく低下したり、または破損しますので十分注意してください。
- 取り付け、取り外し、持ち運びの際は、Fig. 4-2のA部とB部で支えてください。特にアクチュエーター、光検出部、LDプレート部は、手を触れたり力を加えたりしないでください。
- ピックアップASSY本体の調整および分解などはしないでください。
- ピックアップASSYに落下・衝撃は加えないでください。
- ゴミ・ホコリなどの発生する場所、高温・多湿の場所は避けてください。

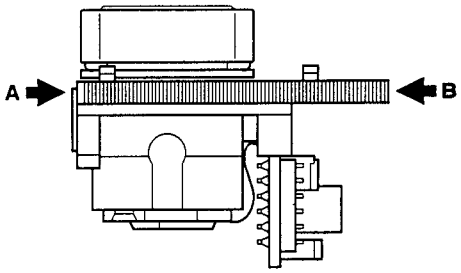


Fig. 4-2

2. Objective

- Laser beams are similar to infrared rays. Don't look at the beams directly and keep your eyes at least 30cm away from them.
- Don't touch the objective with fingers.
- If objective becomes dirty, playback will deteriorate. To clean the objective, moisten a good cleaning tissue, such as made by KODAK, in isopropyl alcohol and wipe the objective gently. Wipe off and excess fluid with a dry cleaning tissue.

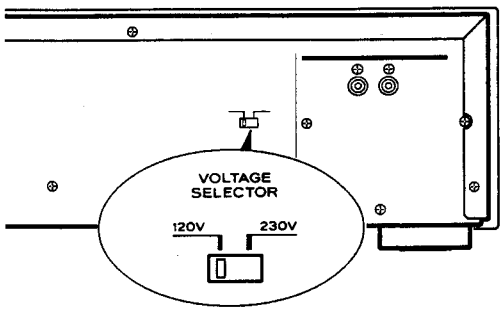
2. 対物レンズについて

- レーザー光は近赤外線の為目視は困難です。目の安全の為、目をレンズから30cm以上離してください。
- レンズには手を触れないでください。
- レンズに汚れが付くと再生能力が低下しますので、次のように清掃してください。
  レンズクリーニングペーパー（KODAK社製など）に、イソプロピールアルコール（I.P.A）を浸して清掃をし、液が残らないように必ず拭きとってください。

VOLTAGE CONVERSION

Be sure to remove the power cord from the AC outlet before repositioning the voltage converter switch.

1. Locate the voltage selector on the rear panel.
2. Using a flat-bladed screwdriver, set to the appropriate 230 V or 120 V position according to your area.



4-1 SERVO ADJUSTMENT

TEST DISC : YEDS-18

4-1-1 Checking the pickup actuator operation

Before loading the disc, turn the power ON and check that the pickup actuator moves up and down six times. (If the pickup is not at inside on the disc, perform the above operation after moving the pickup to the inside.)

4-1-2 Focus gain adjustment

1. Apply **1.16kHz/3.5Vp-p** to **TP1 pin 1 (FE2)** from an external OSC via 100kΩ resistor.
2. Adjust **V402 (F.GAIN)** so that phase at **TP1 pin 2 (FE1)** is 90° with respect to that of the external OSC during playback.

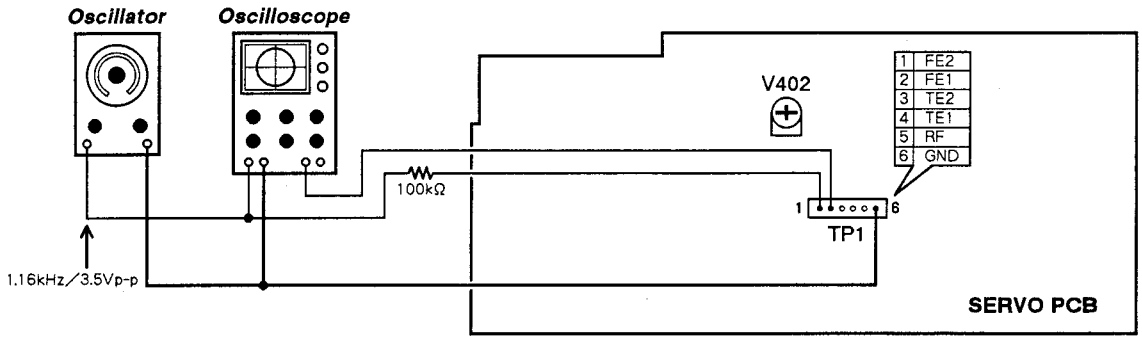


Fig. 4-3

4-1-3 Tracking gain adjustment

1. Apply **1.7kHz/4Vp-p** to **TP1 pin 3 (TE2)** from an external OSC via 100kΩ resistor.
2. Adjust **V401 (T.GAIN)** so that phase at **TP1 pin 4 (TE1)** is 90° with respect to that of the external OSC during playback.

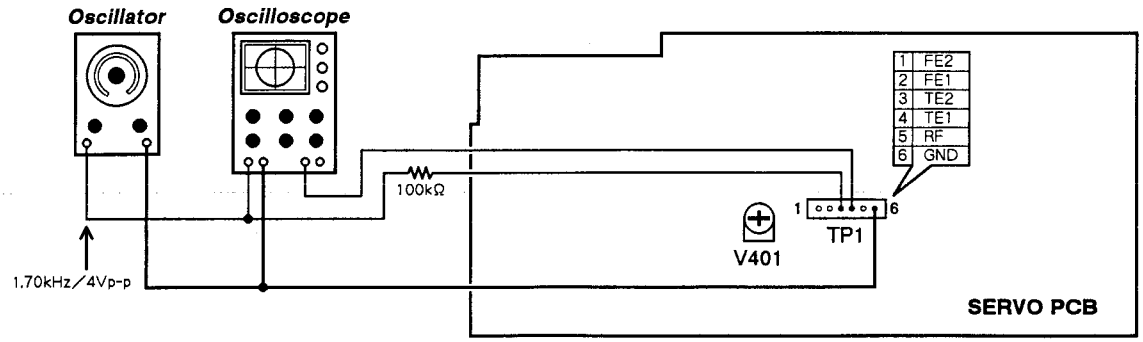


Fig. 4-4

4-1 サーボ調整

テストディスク : YEDS-18

4-1-1 ピックアップアクチュエーター動作チェック

電源ON時ピックアップアクチュエーターが6回(ディスクトレイ開閉時は3回)上下動すること。(ピックアップが最内周にないときは、最内周に移動後上記動作すること。) ディスクは装着しない。

4-1-2 フォーカスゲイン調整

1. 外部OSCより100kΩの抵抗を経由して**1.16kHz/3.5Vp-p**の信号を**TP1の1番ピン(FE2)**に入力する。
2. プレイ状態で**TP1の2番ピン(FE1)**と外部OSCとの位相が90° になるように**V402 (F.GAIN)**を調整する。

4-1-3 トラッキングゲイン調整

1. 外部OSCより100kΩの抵抗を経由して**1.70kHz/4Vp-p**の信号を**TP1の3番ピン(TE2)**に入力する。
2. プレイ状態で**TP1の4番ピン(TE1)**と外部OSCとの位相が90° になるように**V401 (T.GAIN)**を調整する。

4-2 AUDIO ADJUSTMENT オーディオ調整

ITEM 項 目	DISC: YEDS-18 (MCD-111)		SPECIFICATIONS 規 格	REMARKS 備 考
	TRACK No. トラック	FREQUENCY 周波数		
1. Output level 出力レベル	2	1kHz	2.1 ± 0.3Vrms	load impedance : 負荷インピーダンス : 50k Ω
2. Channel level difference チャンネルレベル差	2	1kHz	1.0dB or less	
3. DC offset adjustment DCオフセット調整	17	1kHz	0 ± 5mV	Adjust V151 (Lch), V251 (Rch) on AUDIO PCB so that the offset voltage becomes 0mV. オフセット電圧が0mVになるようAUDIO PCBのV151(Lch), V251 (Rch)を調整する。
4. Harmonic distortion 高調波歪率	2	1kHz	0.004 % or less	400Hz HPF in 20kHz LPF in
5. Frequency response 周波数特性	3~6	20Hz~20kHz	Within ± 1.0dB	reference level: 1kHz
6. S/N ratio S/N比	7		100dB or better	DIN AUDIO (Use SHIBASOKU 725 or equivalent)
7. Channel separation チャンネル セパレーション	8, 10	1kHz	95dB or better	DIN AUDIO
8. Emphasis effect エンファシス効果	13	16kHz	− 9.0 ± 1.0dB (YEDS-18) − 20 ± 1.0dB (MCD-111)	reference level: 1kHz

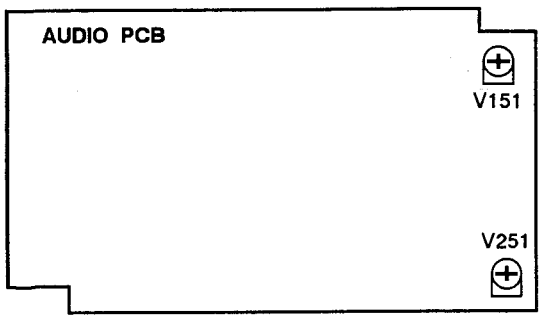


Fig. 4-5 Adjustment locations

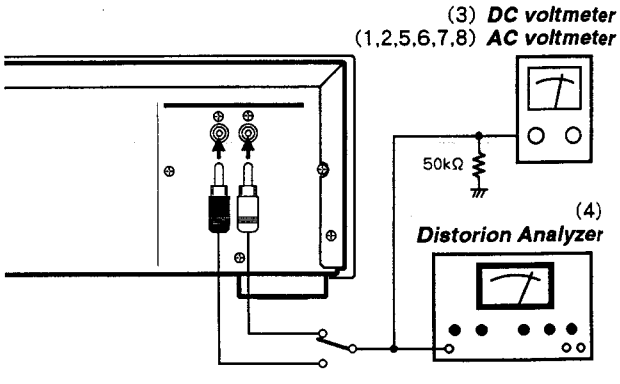
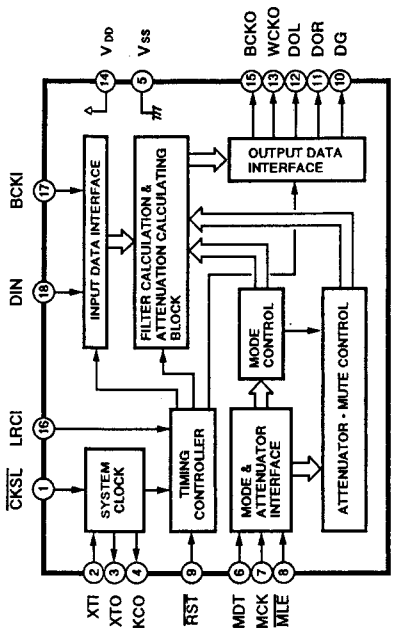


Fig. 4-6 Test setup

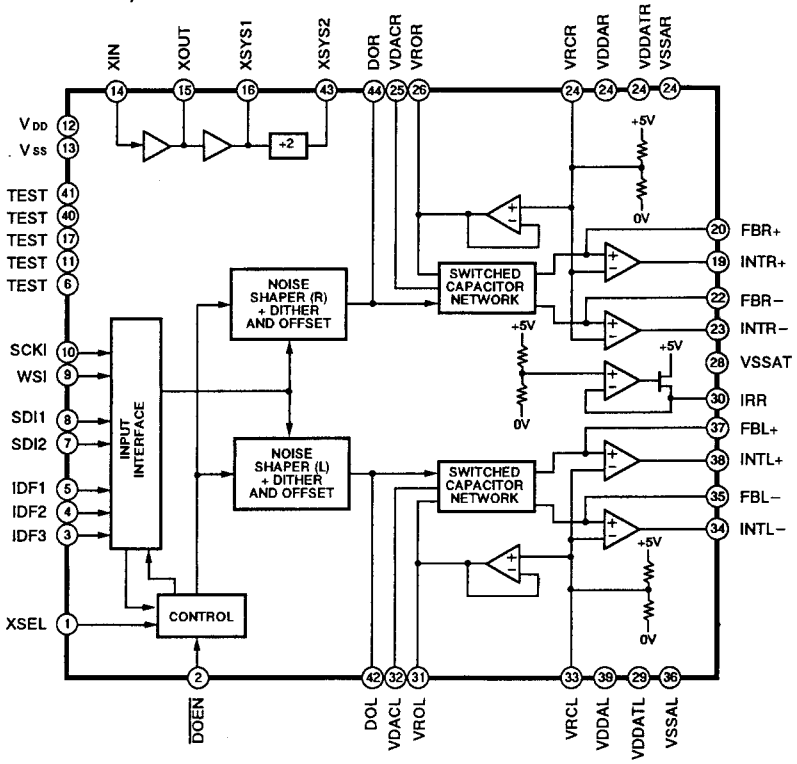
5 IC BLOCK DIAGRAMS

IC ブロックダイヤグラム

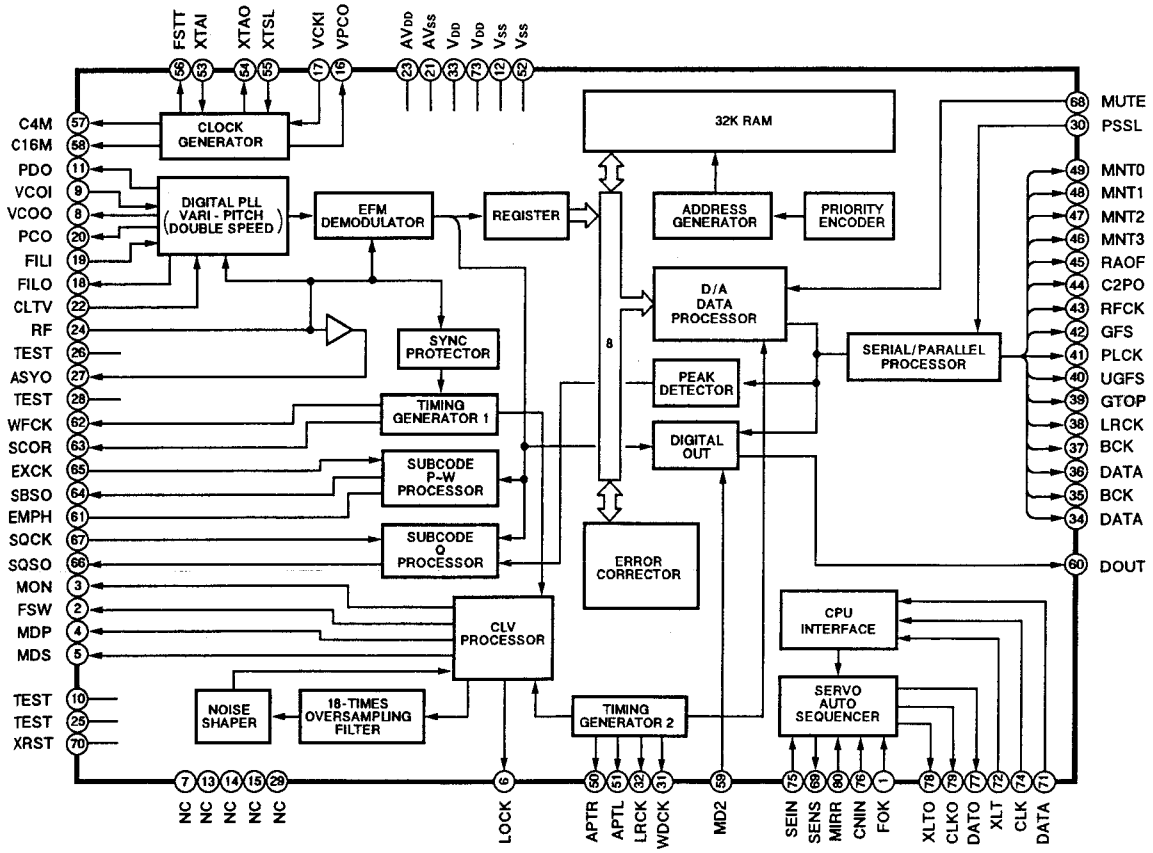
U121 **SM5840AP**



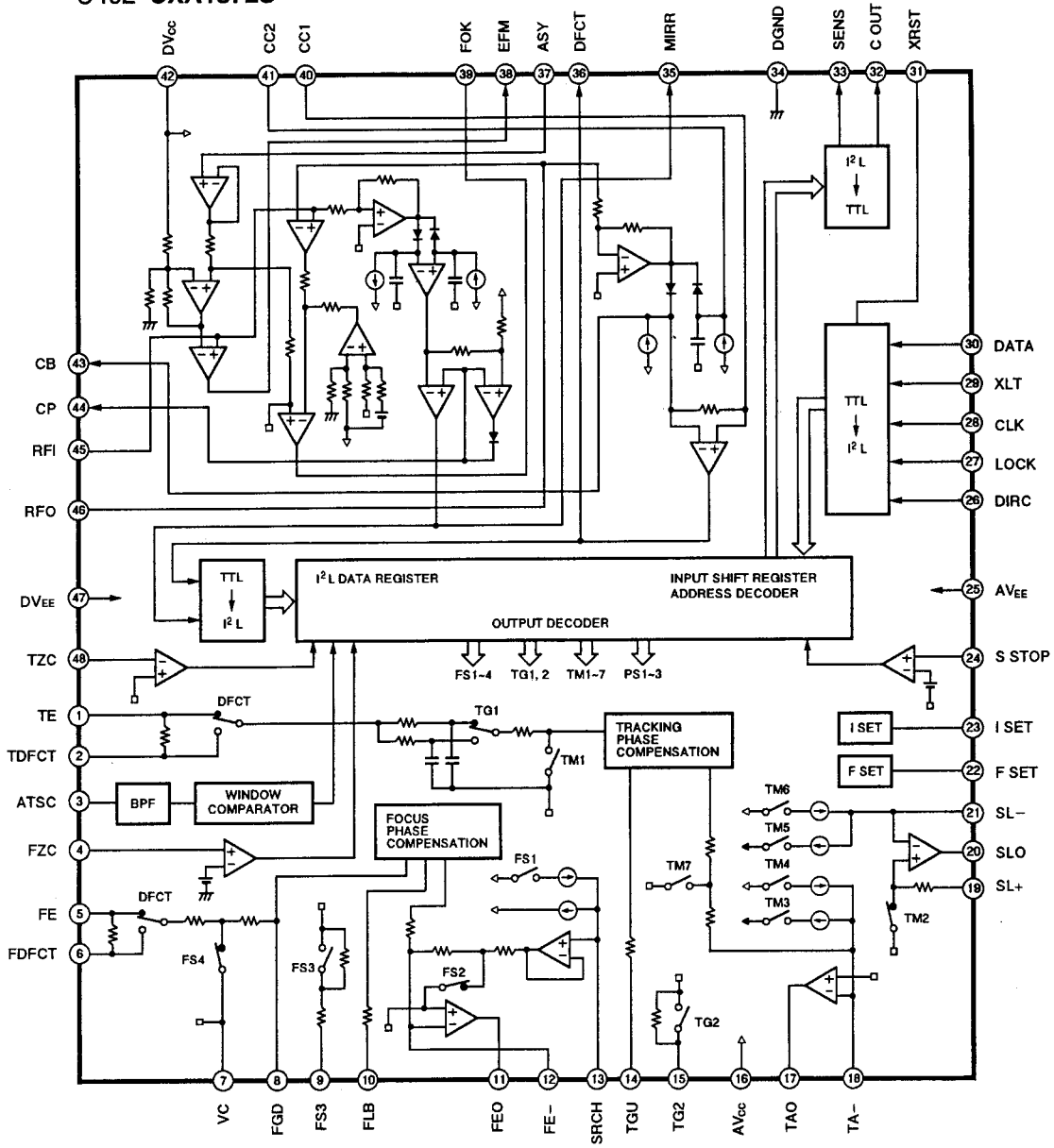
U151, 251 **SAA7350AGP**



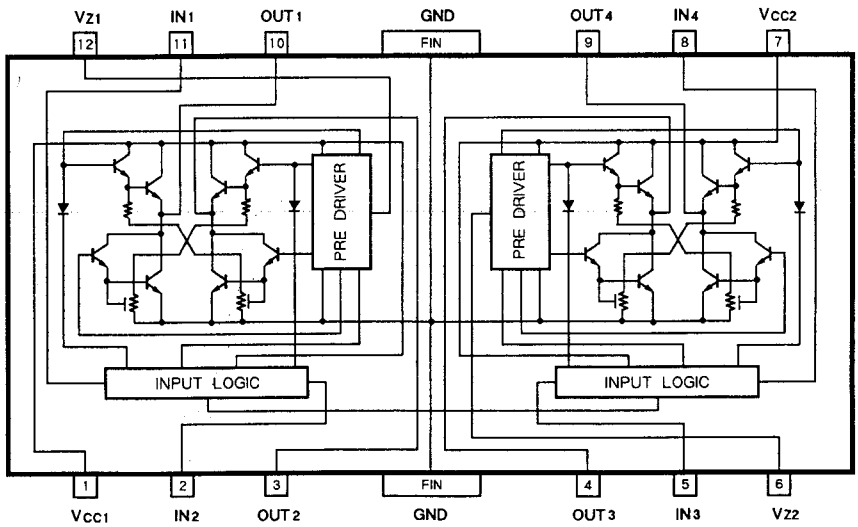
U403 **CXD2500AQ**



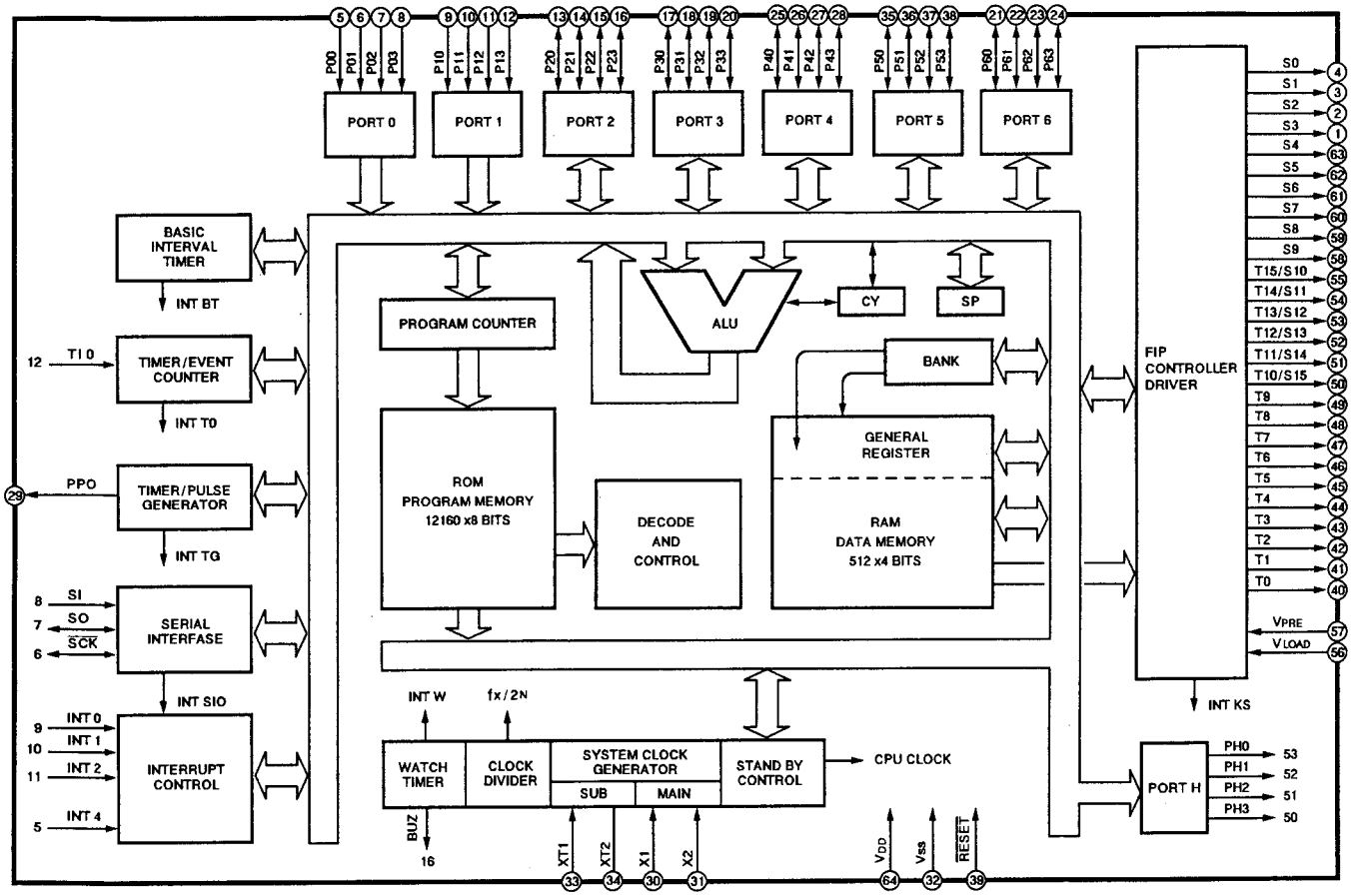
U402 **CXA1372S**



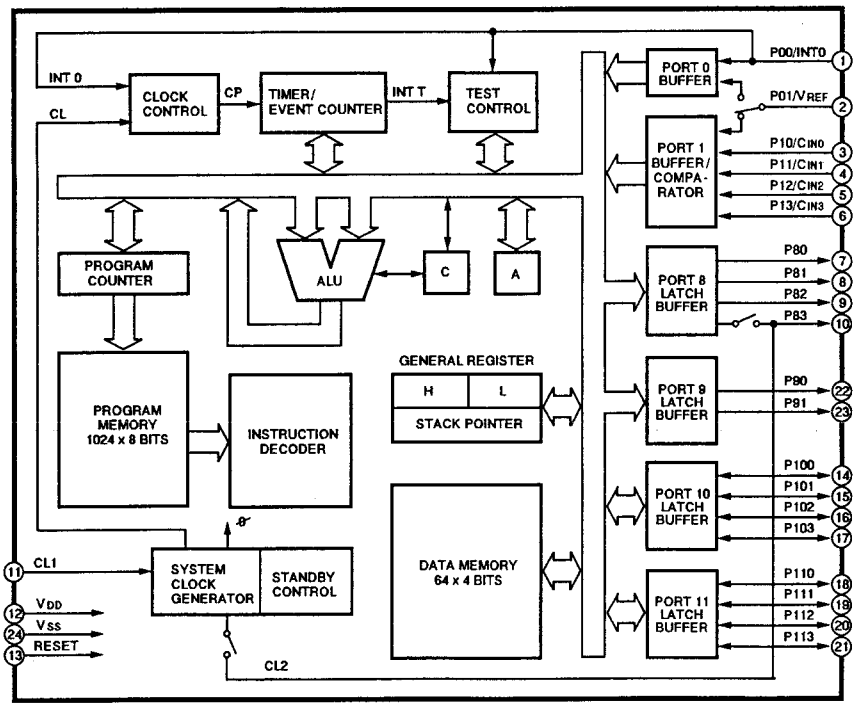
U410 **LB1649**



U491 **uPD75212ACW**



U501 **uPD7566CS**



PARTS LIST SECTION

NOTES

- PC boards shown are viewed from parts side.
- Parts marked with ＊ require longer delivery time.
- The parts with no reference number or no parts number in the exploded views are not supplied.
- As regards the resistors and capacitors, refer to the circuit diagrams contained in this manual.
- ⚠ Parts marked with this sign are safety critical components. They must be replaced with identical components - refer to the appropriate parts list and ensure exact replacement.
- Parts of [ ] mark can be used only with the version designated.
  [J]:JAPAN [ETC]:GENERAL EXPORT, U.S.A. and CANADA
  [GE]:GENERAL EXPORT [E]:EUROPE [UK]:U.K.
  [VRDS-7N]:Gold Version [VRDS-7B]:Black Version

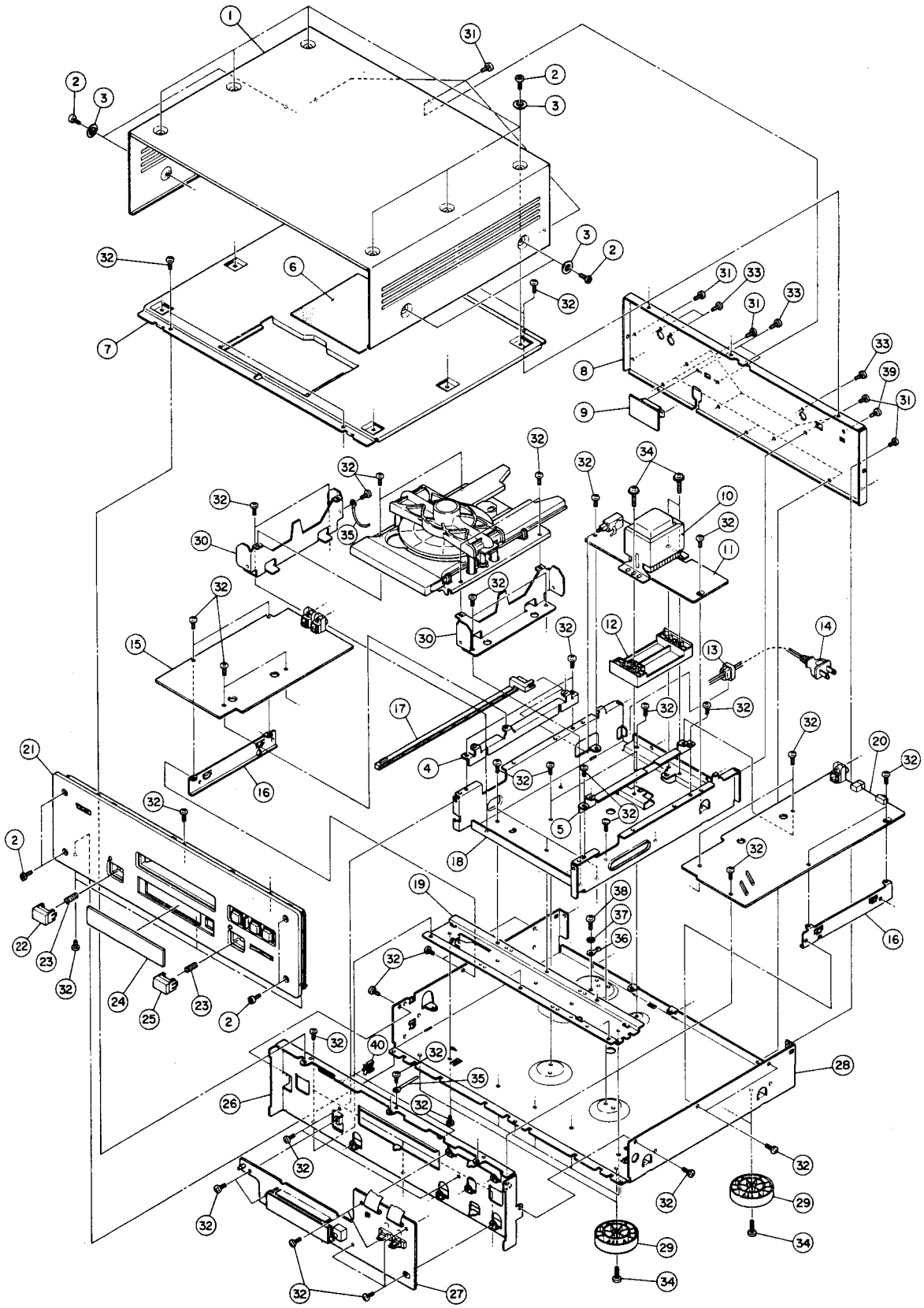
注　意

- プリント基板図は部品面が示されています。
- ＊印の部品は納期が若干かかります。あらかじめご了承ください。
- 分解図に部番のない部品及び品番のない部品は供給しません。
- 標準の抵抗、コンデンサーは省略してあります。回路図を参照してください。
- ⚠印は安全重要部品です。交換する時は必ずティアック指定の部品を使用してください。
- 仕向先
  [J]:JAPAN [ETC]:GENERAL EXPORT, U.S.A. and CANADA
  [GE]:GENERAL EXPORT [E]:EUROPE [UK]:U.K.
  [VRDS-7N]:Gold Version [VRDS-7B]:Black Version

6 EXPLODED VIEWS AND PARTS LIST

分解図とパーツリスト

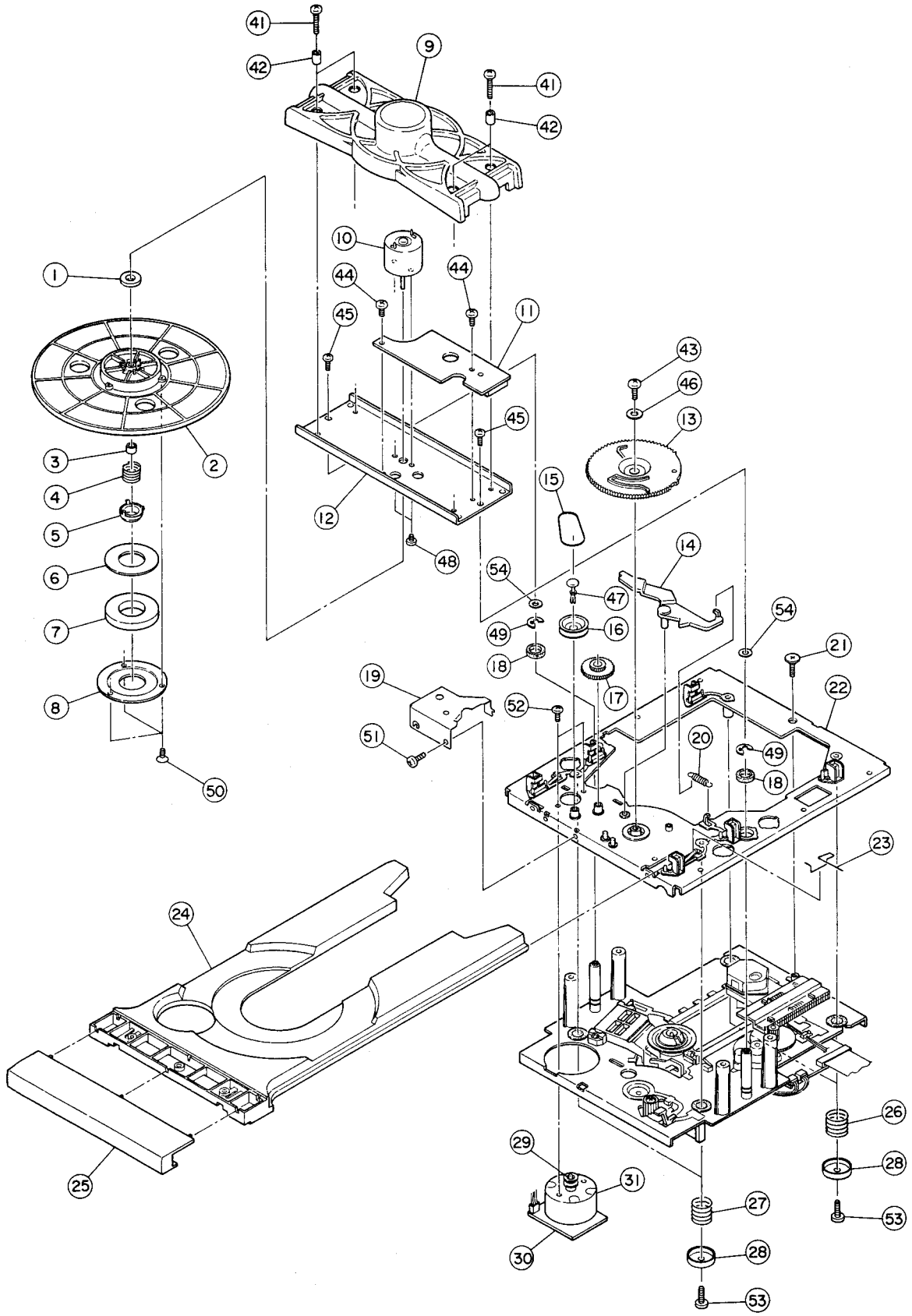
EXPLODED VIEW-1



EXPLODED VIEW-1

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
1- 1	*5808572300	BONNET (7) [VRDS-7N]	
	*5801572500	BONNET (7-B) [VRDS-7B]	
1- 2	*5801532500	BOLT, HEXAGON SOCKET B [VRDS-7N]	
	*5801539500	BOLT, HEXAGON SOCKET B (BLK) [VRDS-7B]	
1- 3	*5801532900	COLLAR	
1- 4	*5801572000	CENTER CHASSIS ANGLE (L)	
1- 5	*5801572100	CENTER CHASSIS ANGLE (R)	
1- 6	*5801598300	RUBBER SHEET, 125X125X0.5T CR	
1- 7	*5801533202	TOP CHASSIS	
1- 8	*5801533001	REAR PANEL (A) [J,E,UK]	
	*5801533101	REAR PANEL (B) [ETC,GE]	
1- 9	*5200345600	VOLTAGE SELECTOR PCB ASSY [ETC,GE]	Refer to pages 20 and 22
1-10	⚠ 5320063300	POWER TRANSFORMER	
1-11	*5200360200	POWER PCB ASSY [J]	Refer to pages 20 and 21
	*5200360230	POWER PCB ASSY [ETC,GE]	Refer to pages 20 and 21
	*5200360240	POWER PCB ASSY [E]	Refer to pages 20 and 21
	*5200360250	POWER PCB ASSY [UK]	Refer to pages 20 and 21
1-12	*5801406000	TRANS BASE	
1-13	⚠ 5317003400	BUSHING, 2271 [EXCEPT ETC]	
	⚠ 5317005600	BUSHING, 2272 [ETC]	
1-14	⚠ 5350015600	AC CORD [J]	
	⚠ 5350010700	AC CORD, SPT-2 [GE]	
	⚠ 5350017600	AC CORD, 3P [ETC]	
	⚠ 5350017500	AC CORD, CLASS 2 [E]	
	⚠ 5128047000	AC CORD, BS [UK]	
1-15	*5200360100	AUDIO PCB ASSY	Refer to pages 20 and 21
1-16	*5801531900	PCB ANGLE	
1-17	*5801532801	JOINT ROD	
1-18	*5801532001	CENTER CHASSIS	
1-19	*5801531600	CHASSIS ANGLE (B)	
1-20	*5200359200	SERVO PCB ASSY	Refer to pages 18 and 19
1-21	*5801572800	FRONT PANEL (7) ASSY [VRDS-7N]	
	*5801573000	FRONT PANEL (7-B) ASSY [VRDS-7B]	
1-22	5801531000	BUTTON CAP (P) ASSY [VRDS-7N]	
	5801539600	BUTTON CAP (P) BLK ASSY [VRDS-7B]	
1-23	*5801070200	POWER SPRING	
1-24	*5801532700	FL COVER	
1-25	5801531100	BUTTON CAP (O/C) ASSY [VRDS-7N]	
	5801539700	BUTTON CAP (O/C) BLK ASSY [VRDS-7B]	
1-26	*5801532200	FRONT CHASSIS	
1-27	*5200359300	KEY PCB ASSY	Refer to pages 18 and 19
1-28	*5801405001	MAIN CHASSIS	
1-29	5801414900	FOOT ASSY	
1-30	*5801571900	MECHA. BASE	
1-31	*5783813006	SCREW, BIND S-TITE M3X6 (ZN BLK)	
1-32	*5783033006	SCREW, BIND S-TITE M3X6	
1-33	*5783543008	SCREW, BIND P-TITE M3X8 (NI BLK)	
1-34	*5783244020	SCREW, BIND S-TITE SEMS-F M4X20	
1-35	*5786713000	HARNESS CLIP	
1-36	*5786700600	EARTH LUG [ETC]	
1-37	*5785124000	WASHER, TOOTHED LOCK [ETC]	
1-38	*5783034006	SCREW, BIND S-TITE M4X6 [ETC]	
1-39	*5780023006	SCREW, BIND M3X6 (NI BLK)	
1-40	*5786772000	CABLE CLAMP, WS-IN	

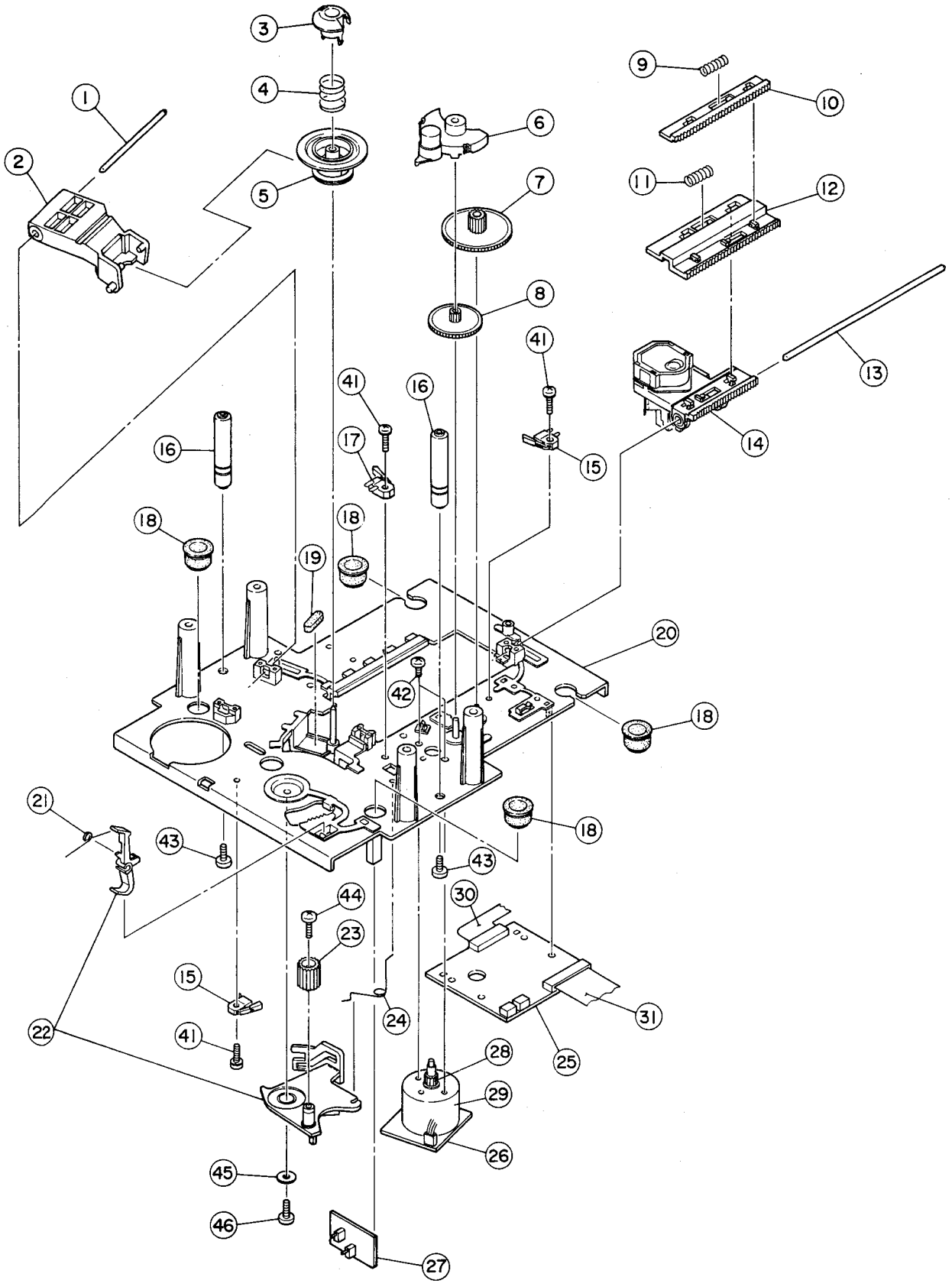
EXPLODED VIEW-2



EXPLODED VIEW-2

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
2- 1	5730033400	MAGNET	
2- 2	5801569700	TURN TABLE	
2- 3	*5801598600	BUSH, 4X2.5	
2- 4	*5801600600	SPRING	
2- 5	*5801599800	CENTER RING	
2- 6	*5801569800	MAGNET YOKE	
2- 7	5801493500	MAGNET	
2- 8	5801057200	MAGNET HOLDER	
2- 9	*5801570000	MOTOR COVER	
2-10	5370008800	DC MOTOR, RF-310T	
2-11	*5200359500	DIRECTION PCB ASSY	Refer to pages 20 and 22
2-12	*5801569900	MOTOR BRACKET	
2-13	5801570900	MAIN GEAR	
2-14	*5801570800	T-LEVER	
2-15	5801571500	LOADING BELT	
2-16	5801571000	PULLEY GEAR	
2-17	5801571100	2-STEP GEAR	
2-18	*5801597500	RING CUSHION T3	
2-19	*5801571400	GEAR COVER	
2-20	*5801392100	COIL SPRING (D)	
2-21	*5801276700	SCREW, STEP	
2-22	----------	MECHA. CHASSIS (B)	
2-23	*5801595300	SUPPORT SPRING	
2-24	5801570500	TRAY	
2-25	5801599700	TRAY PANEL (G) [VRDS-7N]	
	5801573200	TRAY PANEL [VRDS-7B]	
2-26	*5801480500	FLOATING SPG (A)	
2-27	*5801480600	FLOATING SPG (B)	
2-28	*5800846700	SPRING SUPPORT	
2-29	*5801571600	V-PULLEY	
2-30	*5200359700	TRAY MOTOR PCB ASSY	Refer to pages 18 and 19
2-31	5370009200	DC MOTOR, RF-500TB	
2-41	*5780023010	SCREW, BIND M3X10 (NI BLK)	
2-42	*5785604075	SPACER, 4.0X7.5MM	
2-43	*5783543008	SCREW, BIND P-TITE M3X8 (NI BLK)	
2-44	*5780023004	SCREW, BIND M3X4 (NI BLK)	
2-45	*5780002605	SCREW, BIND M2.6X5	
2-46	*5785013000	WASHER, FLAT M3 (0.5T)	
2-47	*5786610400	PUSH RIVET	
2-48	*5730044200	SCREW, PAN M2X3 (BLK)	
2-49	*5786004000	E-RING E-4 (JIS)	
2-50	*5781212005	SCREW, FLAT TAPPING M2X5	
2-51	*5783033006	SCREW, BIND S-TITE M3X6	
2-52	*5780002603	SCREW, BIND M2.6X3	
2-53	*5783603016	SCREW, BIND P-TITE M3X16	
2-54	*5785304100	WASHER, POLY 4.1X6.5X0.25T	

EXPLODED VIEW-3



EXPLODED VIEW-3

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
3- 1	*5801575400	CLAMPER SHAFT	
3- 2	*5801569400	CLAMPER ARM	
3- 3	*5801569600	GUIDE RING	
3- 4	*5801575500	SPRING (C)	
3- 5	5801569500	CLAMPER	
3- 6	*5801569000	GEAR COVER	
3- 7	5801568700	GEAR (A)	
3- 8	5801568800	GEAR (B)	
3- 9	*5801570400	SPRING (B)	
3-10	5801569200	RACK (B)	
3-11	*5801570300	SPRING (A)	
3-12	5801569100	RACK (A)	
3-13	*5801570100	GUIDE SHAFT	
3-14	5347027100	LASER PICK UP	
3-15	5300060200	SW, PUSH	
3-16	*5801600900	MECHA. POST	
3-17	5301457000	SW, DETECT	
3-18	*5801480200	RUBBER BUSH	
3-19	*5801510700	POINT CUSHION	
3-20	----------	MECHA. CHASSIS (A)	
3-21	*5801571700	ACT SP	
3-22	*5801570700	2P ARM	
3-23	5801571200	PLANETARY GEAR	
3-24	*5801571300	REVERSE SPRING	
3-25	*5200359400	CHUKEI PCB ASSY	Refer to pages 20 and 21
3-26	*5200359900	SLED MOTOR PCB ASSY	Refer to pages 18 and 19
3-27	*5200359600	TRAY SW PCB ASSY	Refer to pages 20 and 22
3-28	5801568900	GEAR (C)	
3-29	5370011400	DC MOTOR	
3-30	*5355254200	FLEXIBLE WIRE, 12P	
3-31	*5355252800	FLAT CABLE, 16P	
3-41	*5780132006	SCREW, PAN SEMS-A M2X6	
3-42	*5780022004	SCREW, BIND M2X4 (NI BLK)	
3-43	*5780002605	SCREW, BIND M2.6X5	
3-44	*5783602608	SCREW, BIND P-TITE M2.6X8	
3-45	*5785013000	WASHER, FLAT M3 (0.5T)	
3-46	*5783543008	SCREW, BIND P-TITE M3X8 (NI BLK)	

INCLUDED ACCESSORIES

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
	*5700140301	OWNER'S MANUAL (J) [J]	Japanese
	*5700140401	OWNER'S MANUAL (M) [EXCEPT J]	English, French, German Italian, Spanish, Dutch
	*5744084300	REMOTE CONTROL UNIT, RC-481 [VRDS-7N]	
	*5744085100	REMOTE CONTROL UNIT, RC-495 [VRDS-7B]	
	*5347006900	BATTERY (J) [J]	
	*5347007000	BATTERY (E) [EXCEPT J]	
	*5350017300	PIN PLUG CORD [EXCEPT J]	

7 PC BOARDS AND PARTS LIST

基板図とパーツリスト

SLED MOTOR PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200359900	SLED MOTOR PCB ASSY
	*5210359900	SLED MOTOR PCB

TRAY MOTOR PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200359700	TRAY MOTOR PCB ASSY
	*5210359700	TRAY MOTOR PCB

KEY PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200359300	KEY PCB ASSY
	*5210359300	KEY PCB
	5555590000	EARTH PLATE A
	*5801529700	LED HOLDER
	*5801158000	LED SPACER, L=6
	5347009100	FL DISPLAY, FIP10YM8
	*5801532100	FL GUIDE
	*5801180900	FL CUSHION
D501,502	5224012920	DIODE, 1S2473
D503,504	5224017820	DIODE, MA165P-TA5
D505-508	5225028000	LED, SLV-31DC3F (ORG)
D509,510	5225028800	LED, SLR-34DC3F (ORG)
P501	5336299900	CONNECTOR SOCKET
P502	5336299800	CONNECTOR SOCKET
S501-506	5302108600	SW, TACT
U501	5220812900	IC, UPD7566CS-085
U502	5292210300	REMOTE MODULE
U504-508	5232255620	TR, DTC114ES
W501	5355243800	FLAT CABLE B, 19P
W502	5355243900	FLAT CABLE C, 18P
X501	5347006500	OSC, CERAMIC CSB700A

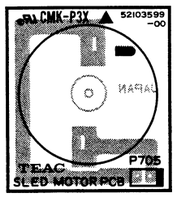
SERVO PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200359200	SERVO PCB ASSY
	*5210359200	SERVO PCB
	5555590000	EARTH PLATE A
	*5801385900	EARTH PLATE
	*5801587200	EARTH PLATE
	*5800990100	HEAT SINK
	5783723008	SCREW, BIND B-TITE M3X8
	5730018100	COATING CLIP, CP-1S
	5347023000	SHIELD SHEET (CU) A
	5347026000	SHIELD SHEET (CU) 55X15

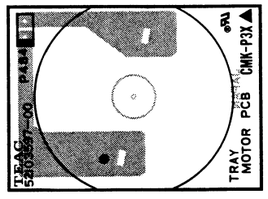
SERVO PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	5347027200	SHIELD SHEET (CU) 10X30
C1	⚠ 5260428110	C, ELEC 4700UF/16V
C2	⚠ 5260427610	C, ELEC 3300UF/16V
D1	⚠ 5228010800	SILICON STACK, S2VB10
D11-13	5224017820	DIODE, MA165P-TA5
D2	5224019320	DIODE, SK09F02
D401,402	5224012920	DIODE, 1S2473
L51	14727479	INDUCTOR FERRITE BEADS
L52	5286033820	COIL, CHOKE 8.2UH
L53	5286033320	COIL, CHOKE 3.3UH
P401	5336296600	CONNECTOR SOCKET
P403	5336303600	CONNECTOR PLUG (WHT)
P404	5336303200	CONNECTOR PLUG (WHT)
P405	5336309200	CONNECTOR PLUG (BLK)
P406	5336303300	CONNECTOR PLUG (WHT)
P407	5336305200	CONNECTOR PLUG (RED)
P408	5336296800	CONNECTOR SOCKET
P409	5336296900	CONNECTOR SOCKET
P410	5336303700	CONNECTOR PLUG (WHT)
P411	5336250200	CONNECTOR PLUG (WHT)
P413	5330512700	PIN JACK, 1P
Q1	5230509100	TR, 2SB562C
Q11	5230781120	TR, 2SC1740SLN
Q403	5231756200	TR, 2SD882Q/P
Q404	5230508900	TR, 2SB772P
S401	5300918300	SW, SLIDE 1-2A
TP1	13150492	CONNECTOR, 6P
TP2	13150488	CONNECTOR, 2P
TP3	5544750000	CONBINATION PIN
U1	⚠ 13447943	IC, NJM78M05FA
U11	5220040700	IC, UPD74HC04C
U2	⚠ 13447961	IC, NJM79M05FA
U402	5220447500	IC, CXA1372S
U403	5220099600	IC, CXD2500AQ
U404	5220442500	IC, LA6500
U405	5220447600	IC, TA8410AK
U407	5220440600	IC, NJM4565L
U410	5220430200	IC, LB1649
U491	5220832900	IC, UPD75212ACW-A70
U4911	5332016900	IC SOCKET, 64P
U492	5232255620	TR, DTC114ES
U494	5220052000	IC, TC74HC32AP
U495	5232255620	TR, DTC114ES
U51	5220041200	IC, UPD74HC00C
U52	5220057500	IC, M74HC6004P
U53	5292209800	OPTICAL MODULE, GP1F31T
V401,402	5280021500	R, SEMI-FIXED 22KB
W202	5241622220	R, METAL 1.0K F MRS25
X491	5347017700	OSC, EFO-GC4194A4
X51	5347010900	OSC, CRYSTAL 16.9344MHZ
Z1	5224592821	DIODE, ZENER RD33ESB1
Z2	5224585621	DIODE, ZENER RD6.2ESB1
Z404	5224585321	DIODE, ZENER RD5.6ESB2
Z405	5224587221	DIODE, ZENER RD9.1ESB1
Z406	5224584121	DIODE, ZENER RD4.3ESB2

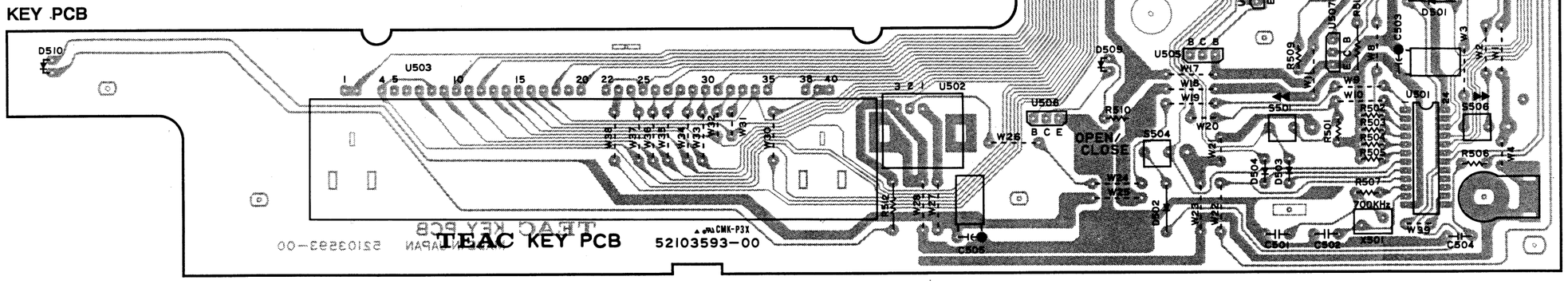
SLED MOTOR PCB



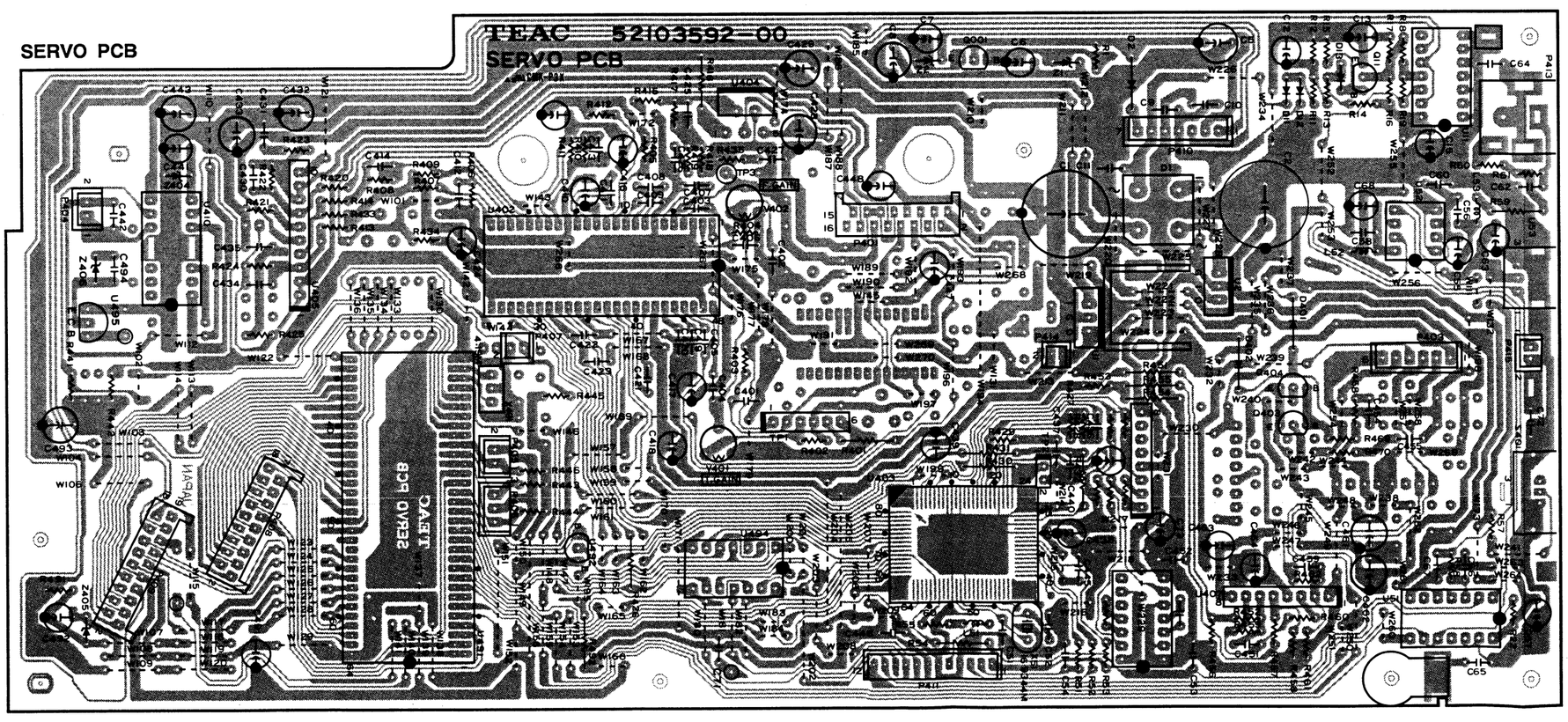
TRAY MOTOR PCB



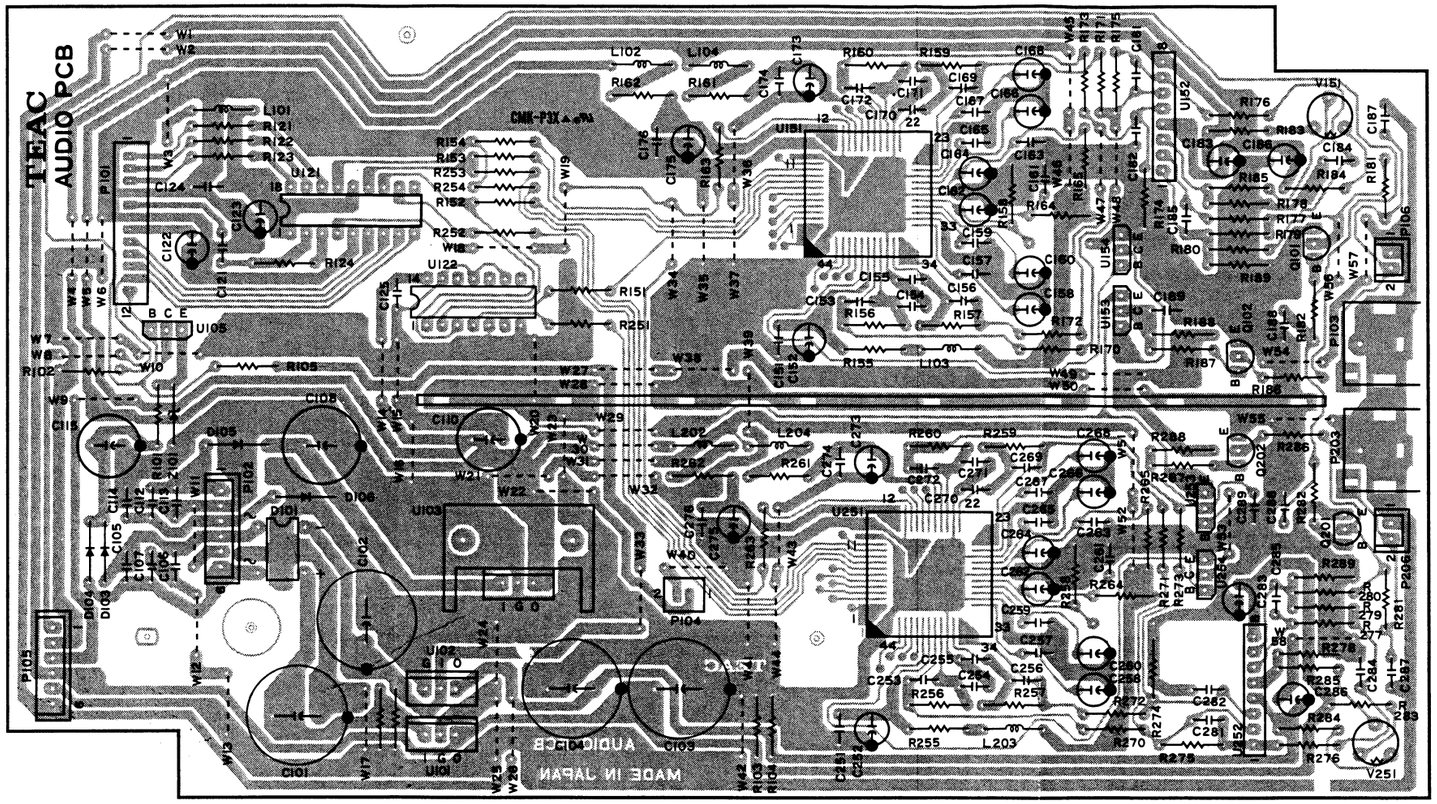
KEY PCB



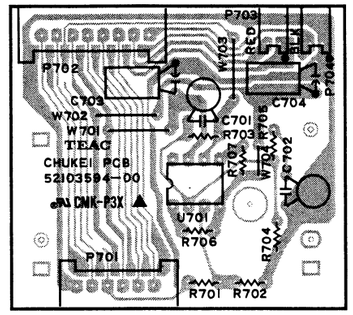
SERVO PCB



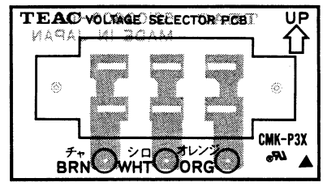
AUDIO PCB



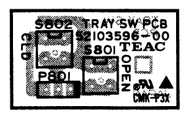
CHUKEI PCB



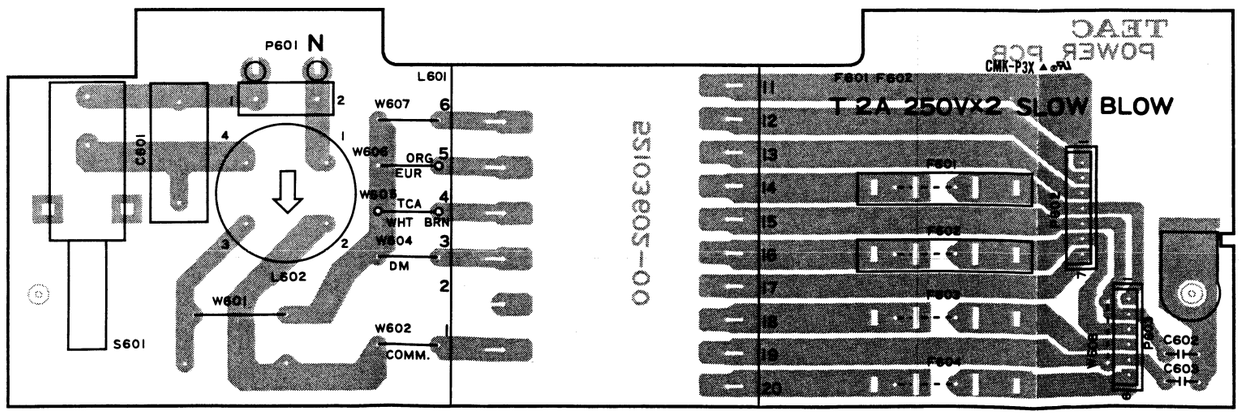
VOLTAGE SELECTOR PCB



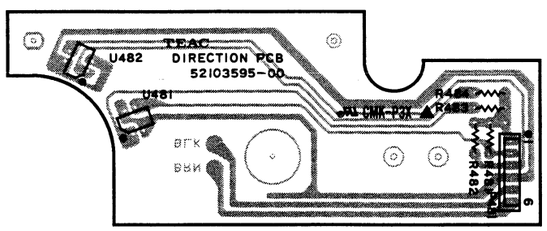
TRAY SW PCB



POWER PCB



DIRECTION PCB



AUDIO PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200360100	AUDIO PCB ASSY
	*5210360100	AUDIO PCB
	*5801385900	EARTH PLATE
	*5801433600	BUSS BAR, L142 N8 OFC 0.8
	5730039200	HEAT SINK
	5347023000	SHIELD SHEET (CU) A
	5347026200	SHEILD SHEET (CU) 19X5
	5347028200	SHIELD SHEET (CU) 11X11
C101,102	⚠ 5260427110	C, ELEC 2200UF/25V
C108	⚠ 5260427010	C, ELEC 2200UF/16V
C115	⚠ 5260425810	C, ELEC 470UF/16V
D101	⚠ 5228010700	SILICON STACK, S1WB(A)20
D103,104	⚠ 5224012920	DIODE, 1S2473
D105,106	⚠ 5224019320	DIODE, SK09F02
L101	5286033520	COIL, CHOKE 4.7UH
L102,202	5286033520	COIL, CHOKE 4.7UH
L103,203	5286033520	COIL, CHOKE 4.7UH
L104,204	5286033520	COIL, CHOKE 4.7UH
P102	5336303600	CONNECTOR PLUG (WHT)
P103	5330513700	PIN JACK, 1P
P203	5330513800	PIN JACK, 1P
Q101,201	5231762520	TR, 2SD1915TA
Q102,202	5231762520	TR, 2SD1915TA
R101	5241620620	R, METAL 220 F MRS25
R102	5241624620	R, METAL 10K F MRS25
R103,104	5241623020	R, METAL 2.2K F MRS25
R105	5241627020	R, METAL 100K F MRS25
R121-123	5241619820	R, METAL 100 F MRS25
R124	5241627020	R, METAL 100K F MRS25
R151,251	5241620620	R, METAL 220 F MRS25
R152,252	5241620620	R, METAL 220 F MRS25
R153,253	5241620620	R, METAL 220 F MRS25
R154,254	5241620620	R, METAL 220 F MRS25
R155,255	5241616420	R, METAL 3.9 F MRS25
R156,256	5241625720	R, METAL 30K F MRS25
R157,257	5241625720	R, METAL 30K F MRS25
R158,258	5241625520	R, METAL 24K F MRS25
R159,259	5241625720	R, METAL 30K F MRS25
R160,260	5241625720	R, METAL 30K F MRS25
R161,261	5241616420	R, METAL 3.9 F MRS25
R162,262	5241617420	R, METAL 10 F MRS25
R163,263	5241620620	R, METAL 220 F MRS25
R164,264	5241619820	R, METAL 100 F MRS25
R165,265	5241619820	R, METAL 100 F MRS25
R170,270	5241624920	R, METAL 13K F MRS25
R171,271	5241624920	R, METAL 13K F MRS25
R172,272	5241624920	R, METAL 13K F MRS25
R173,273	5241624920	R, METAL 13K F MRS25
R174,274	5241624420	R, METAL 8.2K F MRS25
R175,275	5241624420	R, METAL 8.2K F MRS25
R176,276	5241621620	R, METAL 560 F MRS25
R177,277	5241622120	R, METAL 910 F MRS25
R178,278	5241624620	R, METAL 10K F MRS25
R179,279	5241621620	R, METAL 560 F MRS25
R180,280	5241622220	R, METAL 1.0K F MRS25

AUDIO PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
R181,281	5241619820	R, METAL 100 F MRS25
R182,282	5241623820	R, METAL 4.7K F MRS25
R183,283	5241624620	R, METAL 10K F MRS25
R184,284	5241624620	R, METAL 10K F MRS25
R185,285	5241627020	R, METAL 100K F MRS25
R186,286	5241621020	R, METAL 330 F MRS25
R187,287	5241623820	R, METAL 4.7K F MRS25
R188,288	5241627020	R, METAL 100K F MRS25
R189,289	5241626220	R, METAL 47K F MRS25
U101	⚠ 13447947	IC, NJM78M12FA
U102	⚠ 13447965	IC, NJM79M12FA
U103	⚠ 13447943	IC, NJM78M05FA
U105	5232254720	TR, DTA114ES
U121	5220099800	IC, SM5840AP
U122	5220040700	IC, UPD74HC04C
U151,251	5220099700	IC, SAA7350GP
U152,252	5220448100	IC, NJM2114L
U153,253	5232254720	TR, DTA114ES
U154,254	5232255620	TR, DTC114ES
V151,251	5280181302	R, SEMI-FIXED 2.2KB
Z101	5224584921	DIODE, ZENER RD5.1ESB2

POWER PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200360200	POWER PCB ASSY [J]
	*5200360230	POWER PCB ASSY [ETC,GE]
	*5200360240	POWER PCB ASSY [E]
	*5200360250	POWER PCB ASSY [UK]
	*5210360200	POWER PCB
	5332015800	FUSE HOLDER
	5555590000	EARTH PLATE A
C601	⚠ 5267704100	SPARK KILLER,0.0047UF/250V
F601,602	⚠ 5307050200	FUSE,2A SLOW BLOW[J,ETC,GE]
F601,602	⚠ 5307053100	FUSE,2A TIME LAG [E,UK]
L602	⚠ 5292806300	NOISE FILTER
P601	5327007200	TERMINAL, 2P [E,UK]
S601	⚠ 5300054700	SW, PUSH 1-1

CHUKEI PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200359400	CHUKEI PCB ASSY
	*5210359400	CHUKEI PCB
P701	5336299200	CONNECTOR SOCKET
P702	5336299600	CONNECTOR SOCKET
P703	5336291200	CONNECTOR PLUG (RED)
P704	5336293200	CONNECTOR PLUG (BLK)
R706,707	5241459820	R, METAL 4.7K F CRB2J
U701	5220450000	IC, UPC813P

VOLTAGE SELECTOR PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200345600	VOLTAGE SELECTOR PCB ASSY [ETC,GE]
	*5210345601	VOLTAGE SELECTOR PCB
	⚠ 5300918600	VOLTAGE SELECTOR, SDKGA4

TRAY SW PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200359600	TRAY SW PCB ASSY
	*5210359600	TRAY SW PCB
S801,802	5301654000	SW, PUSH

DIRECTION PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200359500	DIRECTION PCB ASSY
	*5210359500	DIRECTION PCB
U481,482	5228017700	PHOTO INTERRUPTER, GP2S24

APPENDIX
付 録

MCD-111

TNO	INDEX	CONTENTS				EMPHASIS	TIME	PURPOSE
1	1	Piano Sonata No. 15				OFF	3′22″	General
2	1	1kHz	Sine Wave	0dB	L&R	OFF	56″	Reference
3	1	20Hz	Sine Wave	0dB	L&R	OFF	56″	Frequency Response THD vs Frequency Modulation Noise
4	1	100Hz	Sine Wave	0dB	L&R	OFF	56″	
5	1	10kHz	Sine Wave	0dB	L&R	OFF	56″	
6	1	20kHz	Sine Wave	0dB	L&R	OFF	56″	
7	1	Infinity Zero		−∞dB	L&R	OFF	56″	S/N
8	1	1kHz	Sine Wave	0dB	L	OFF	56″	Channel Separation
9	1	10kHz	Sine Wave	0dB	L	OFF	56″	
10	1	1kHz	Sine Wave	0dB	R	OFF	56″	
11	1	10kHz	Sine Wave	0dB	R	OFF	56″	
12	1	5kHz	Sine Wave	−20dB	L&R	ON	56″	De emphasis
13	1	16kHz	Sine Wave	−20dB	L&R	ON	56″	
14	1	100Hz	Sine Wave	−20dB	L&R	OFF	56″	Tone Control Frequency Response
15	1	1kHz	Sine Wave	−20dB	L&R	OFF	56″	
16	1	10Hz	Sine Wave	−20dB	L&R	OFF	56″	
17	1	1kHz	Sine Wave	−60dB	L&R	OFF	56″	Dynamic Range
18	1	Brilliant Grand Waltz				ON	4′42″	General
19	1	For Elise				OFF	1′00″	INDEX
	2	〃				OFF	1′00″	
	3	〃				OFF	2′39″	
	4	Hungarian Rhapsody No. 2				OFF	1′00″	
	5	〃				OFF	1′00″	
	6	〃				OFF	3′04″	
	7	Moonlight Sonata				OFF	1′00″	
	8	〃				OFF	1′00″	
	9	〃				OFF	2′45″	
	10	Pavane for the Deceased Princess				OFF	1′00″	
	11	〃				OFF	1′00″	
	12	〃				OFF	3′32″	
	13	The Marriage of Figaro Overture				OFF	1′00″	
	14	〃				OFF	1′00″	
	15	〃				OFF	3′46″	
	16	Nutcracker Suite ″ Miniature Overture ″				OFF	1′00″	
	17	〃				OFF	1′00″	
	18	〃				OFF	2′15″	
	19	Nutcracker Suite ″ Waltz of the Flowers ″				OFF	1′00″	
	20	〃				OFF	5′25″	
20	1	Aria on G String				OFF	4′29″	General
21	1	1kHz	Sine Wave	−10dB	L&R	OFF	10″	Access
22	1	Jesus, Joy of Man's Desiring				OFF	3′02″	Access
		TOTAL TIME (including Pause Time)					68′23″	

MEMO

TEAC SCHEMATIC DIAGRAM VRDS-7

PICKUP ASSEMBLY

SLED MOTOR PCB

NAISHU SW

CHUKEI PCB

SPINDLE MOTOR

DIRECTION PCB

TRAY SW PCB

OPEN

CLD

GAISHU SW

CHUKAN SW

TRAY MOTOR PCB

TRAY MOTOR

KEY PCB

SERVO PCB

U501 μPD7566CS-085
U502 SBX1610-52 (REMOTE MODULE)
U503 FIP10YMB (FL TUBE)
U504 ~ U508 DTC114ES

D501, D502 1S2473
D503, D504 MA165P-TA5
D505 ~ D508 SLV-31DC3F (LED ORANGE)
D509, D510 SLR-34DC3F (LED ORANGE)

INSTRUCTIONS FOR SERVICE PERSONNEL

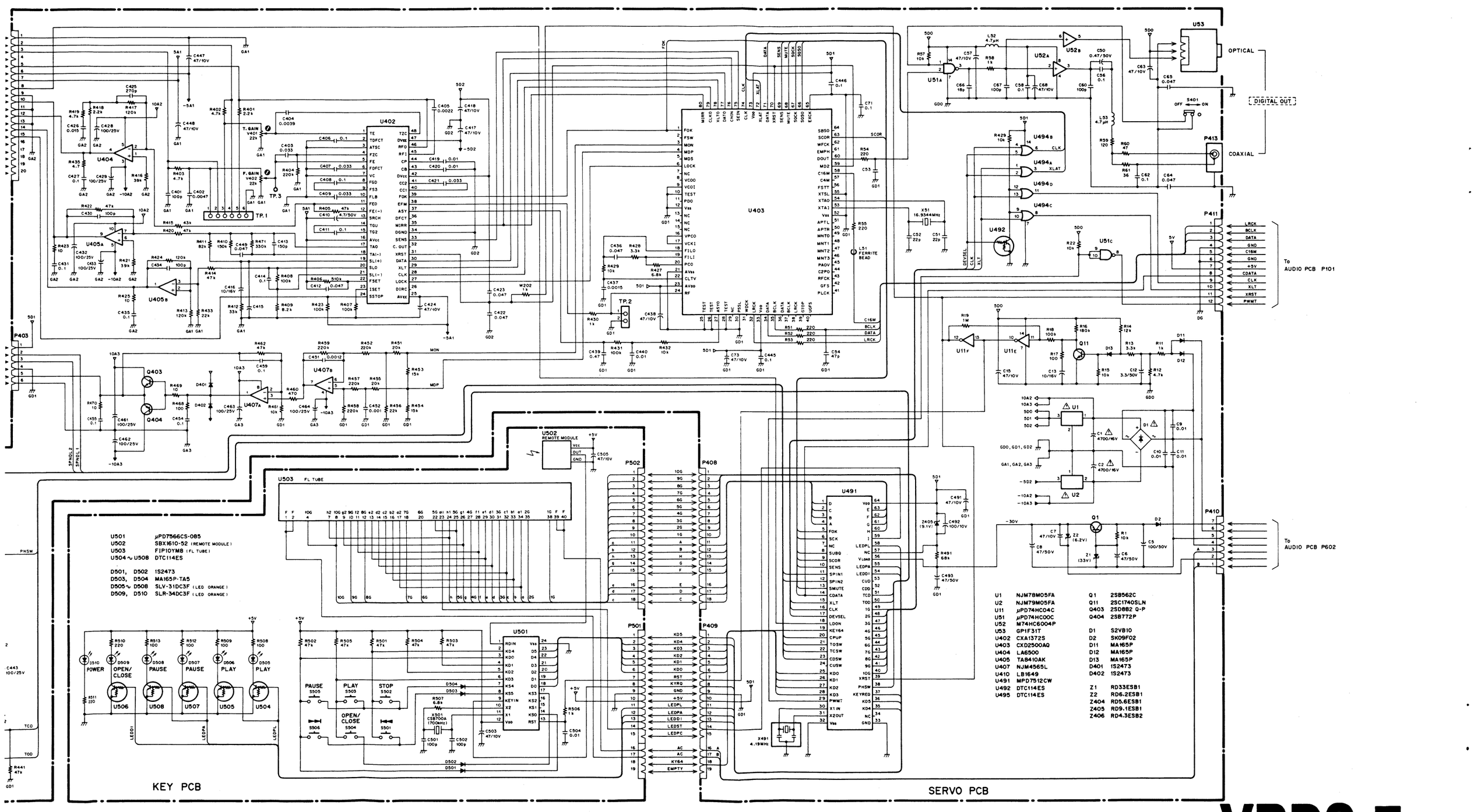
BEFORE RETURNING APPLIANCE TO THE CUSTOMER, MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT.

NOTES:

1. Resistor values are in ohms (k=kilo-ohms, M=megohms).
2. Capacitor values are in microfarads (p=picofarads).
3. ⚠ Parts marked with this sign are safety critical components. They must always be replaced with identical components-refer to the appropriate parts list and ensure exact replacement.

注意

1. 抵抗の単位はΩ（k = kΩ, M = MΩ）です。
2. コンデンサの単位はμF（p = pF）です。
3. ⚠マークのある部品は安全規格重要部品です。
   交換するときは必ずティアック指定の部品を使用してください。



NOTES:

1. Resistor values are in ohms (k=kilo-ohms, M=megohms).
2. Capacitor values are in microfarads (p=picofarads).
3. ⚠ Parts marked with this sign are safety critical components. They must always be replaced with identical components-refer to the appropriate parts list and ensure exact replacement.

注意

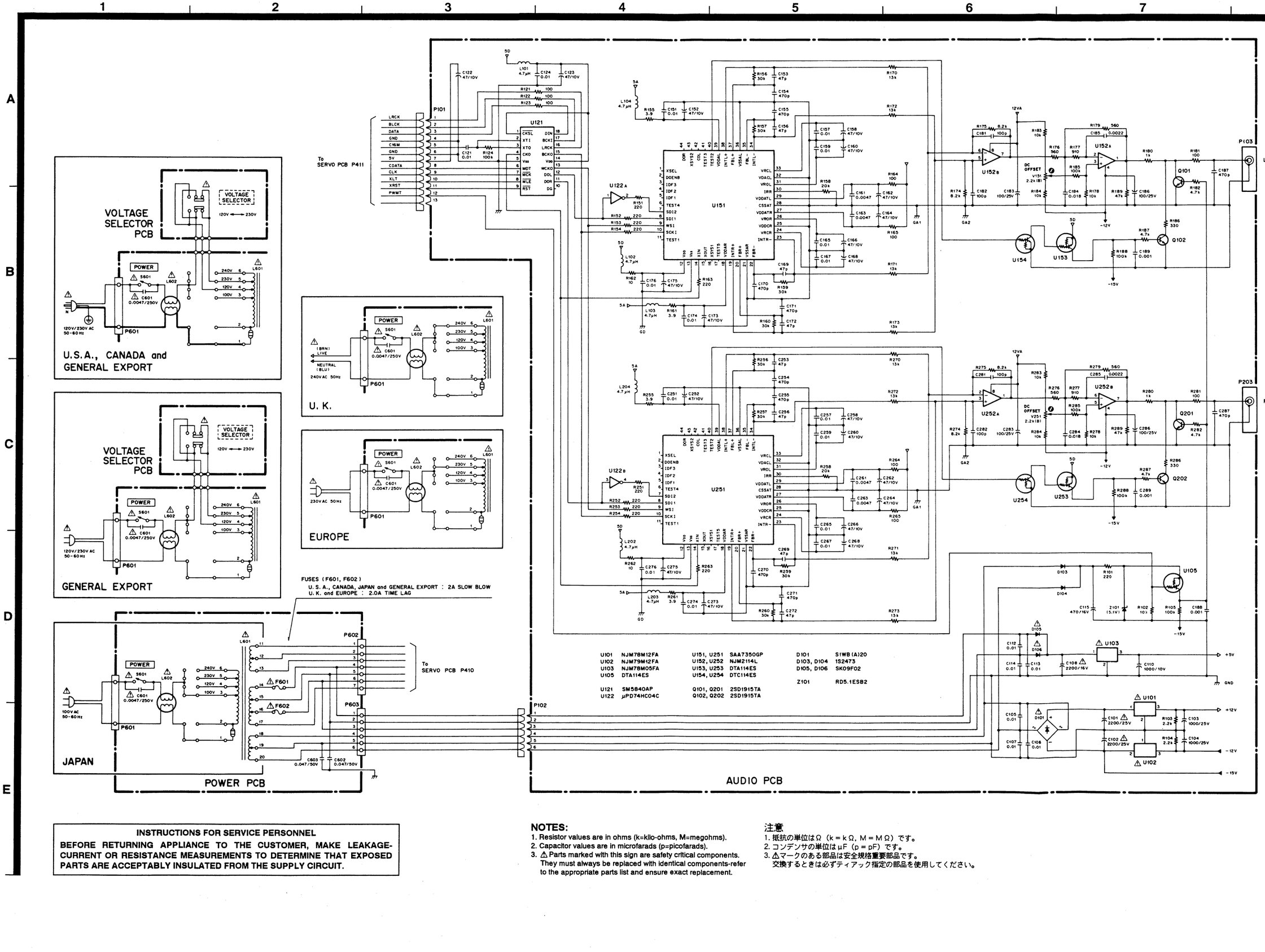
1. 抵抗の単位はΩ（k＝kΩ, M＝MΩ）です。
2. コンデンサの単位はμF（p＝pF）です。
3. ⚠マークのある部品は安全規格重要部品です。
   交換するときは必ずティアック指定の部品を使用してください。

VRDS-7

Compact Disc Player

1 st Issue; June 1993

TEAC SCHEMATIC DIAGRAM VRDS-7



U101	NJM78M12FA	U151, U251	SAA7350GP	D101	S1WB (A)20
U102	NJM79M12FA	U152, U252	NJM2114L	D103, D104	1S2473
U103	NJM78M05FA	U153, U253	DTA114ES	D105, D106	SK09F02
U105	DTA114ES	U154, U254	DTC114ES	Z101	RD5.1ESB2
U121	SM5840AP	Q101, Q201	2SD1915TA		
U122	μPD74HC04C	Q102, Q202	2SD1915TA		

INSTRUCTIONS FOR SERVICE PERSONNEL

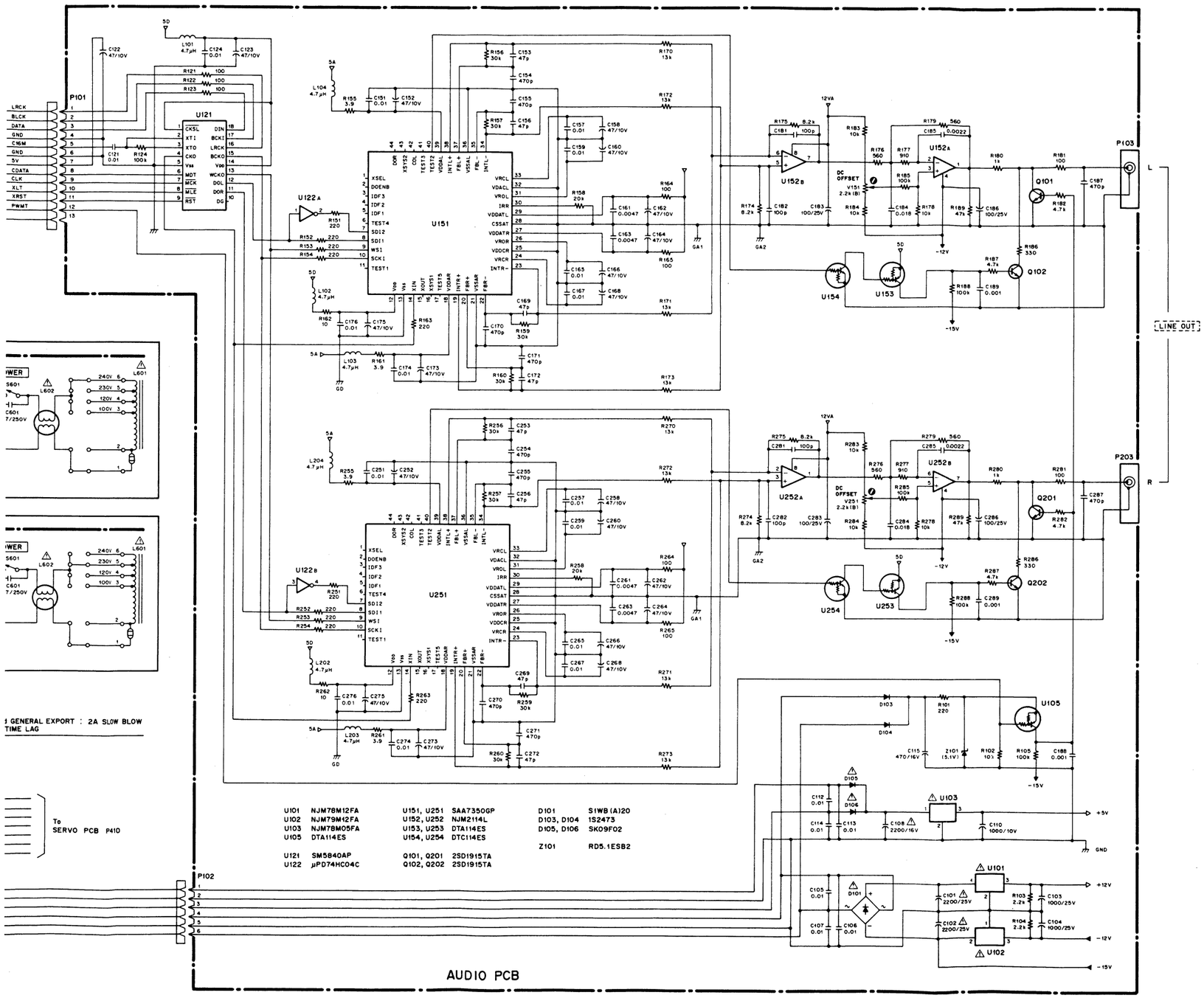
BEFORE RETURNING APPLIANCE TO THE CUSTOMER, MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT.

NOTES:

1. Resistor values are in ohms (k=kilo-ohms, M=megohms).
2. Capacitor values are in microfarads (p=picofarads).
3. ⚠ Parts marked with this sign are safety critical components. They must always be replaced with identical components-refer to the appropriate parts list and ensure exact replacement.

注意

1. 抵抗の単位はΩ（k＝kΩ, M＝MΩ）です。
2. コンデンサの単位はμF（p＝pF）です。
3. ⚠マークのある部品は安全規格重要部品です。
   交換するときは必ずティアック指定の部品を使用してください。



U101	NJM78M12FA	U151, U251	SAA7350GP	D101	S1WB(A)120
U102	NJM79M12FA	U152, U252	NJM2114L	D103, D104	1S2473
U103	NJM78M05FA	U153, U253	DTA114ES	D105, D106	SK09F02
U105	DTA114ES	U154, U254	DTC114ES		
				Z101	RD5.1ESB2
U121	SM5840AP	Q101, Q201	2SD1915TA		
U122	μPD74HC04C	Q102, Q202	2SD1915TA		

NOTES:
1. Resistor values are in ohms (k=kilo-ohms, M=megohms).
2. Capacitor values are in microfarads (p=picofarads).
3. ⚠ Parts marked with this sign are safety critical components. They must always be replaced with identical components-refer to the appropriate parts list and ensure exact replacement.

注意
1. 抵抗の単位はΩ（k＝kΩ，M＝MΩ）です。
2. コンデンサの単位はμF（p＝pF）です。
3. ⚠マークのある部品は安全規格重要部品です。
交換するときは必ずティアック指定の部品を使用してください。

VRDS-7
Compact Disc Player
1 st Issue; June 1993